

Amendments to the Claims:

The following Listing of Claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently amended) A pleated filter element, each pleat comprising:
a microporous membrane filtration media having an upstream and a downstream surface or side;

an upstream microporous membrane filtration media pleat support positioned upstream from and in-contact with adjacent the upstream surface of the microporous membrane filtration media; and

a multi-layer downstream microporous membrane filtration media pleat support positioned downstream from the microporous membrane filtration media, the multi-layer downstream pleat support including a first downstream pleat support layer and a second downstream pleat support layer, wherein:

the first downstream pleat support layer is in contact with the filtration media and is interposed between the microporous membrane filtration media and the second downstream pleat support layer, the first downstream pleat support layer is a spunbond material fabricated so as to minimize points of surface contact with the filtration media; and

the second downstream pleat support layer is in contact with the first downstream pleat support layer and is fabricated so as to facilitate lateral fluid flow relative to through the multi-layer downstream pleat support, wherein the second downstream support layer comprises an extruded apertured film having ribs formed on at least one side, the primary strand or rib formation running in the machine direction the ribs maintaining a gap when the microporous membrane filtration media is folded onto itself.

2. (Currently amended) A filter element as recited in Claim 1, wherein the filtration media is a pleated microporous membrane filtration media having comprises a plurality of longitudinally extending pleats.

3. (Currently amended) A filter element as recited in Claim 2, wherein the longitudinally extending pleats of said pleated microporous membrane filtration media are selected from the group consisting of radial pleats, w-pleats and spiral pleats.

4. (Currently amended) A filter element as recited in Claim 1, wherein the microporous membrane filtration media has is a microporous filtration membrane having a pore size of from about 0.1 microns to about 10 microns.

5. (Currently amended) A filter element as recited in Claim 1, wherein the microporous membrane filtration media is fabricated from a material selected from the group consisting of PTFE, nylon, polyaramide, polyvinylidene difluoride, polyether sulfone and combinations thereof.

6. (cancelled).

7. (cancelled).

8. (Currently amended) A filter element as recited in Claim 7 1, wherein said nonwoven spunbond material is laminated to said microporous membrane filtration media.

9. (cancelled).

10. (cancelled).

11. (cancelled).

12. (currently amended) A filter element, comprising:

a microporous membrane filtration media having an upstream and a downstream surface;

an upstream pleat support positioned upstream from and in contact with the upstream surface of the microporous membrane filtration media; and

a multi-layer downstream pleat support positioned downstream from the microporous membrane filtration media, the multi-layer downstream support including at least a first downstream support layer and a second downstream support layer, wherein:

the first downstream support layer is in contact with the microporous membrane filtration media and is interposed between the microporous membrane filtration media and the second downstream layer, the first downstream support layer is fabricated so as to minimize points of surface contact with the filtration media; and

the second downstream support layer is adjacent in contact with the first downstream support layer and is fabricated so as to facilitate lateral fluid flow relative to the multi-layer downstream pleat support, wherein the second downstream support layer comprises an extruded apertured film having ribs formed on at least one side, the primary strand or rib formation running in the machine direction the ribs maintaining a gap when the microporous membrane filtration media is folded onto itself.

13. (Currently amended) A filter cartridge comprising:

a filter element having a longitudinal axis, an outer periphery and an inner periphery, and including a microporous membrane filtration media having upstream and downstream surfaces;

an upstream filter media support positioned upstream from and in contact with saidthe upstream surface of the microporous membrane filtration media; and a

multi-layer downstream support positioned downstream from the filtration media, the multi-layer downstream support including a first downstream support layer and a second downstream support layer, wherein:

the first downstream support layer is in-contact with the filtration media and is interposed between the filtration media and the second downstream layer, the first downstream support layer being fabricated so as to minimize points of surface contact with the filtration media; and

the second downstream support layer is adjacent in contact with the first downstream support layer and is fabricated so as to facilitate lateral fluid flow relative to the multi-layer downstream filter media support, wherein the second downstream support layer comprises an extruded apertured film having ribs formed on one side, the primary strand or rib formation running in the machine direction the ribs maintaining a gap when the microporous membrane filtration media is folded onto itself;

a perforated cage surrounding the outer periphery of the filter element;

a perforated core surrounded by the inner periphery of the filter element;
and

end caps enclosing both ends of the perforated cage.

14. (Original) A filter cartridge as recited in Claim 13, wherein said first downstream support layer is fabricated from a nonwoven material.

15. (currently amended) A filter cartridge as recited in Claim 14, wherein said nonwoven material is laminated to said microporous membrane filtration media.

16. (Original) A filter element as recited in Claim 14, wherein said nonwoven material is fabricated as a spunbond, spunlace, airlaid or wetlaid material.

17. (Original) A filter element as recited in Claim 14, wherein said nonwoven material is fabricated from polypropylene, polyester or polyamide.

18. (Cancelled).

19. (Cancelled).

20. (Cancelled).

21. (Original) A filter cartridge as recited in Claim 13 wherein said perforated core is a cylindrical core and is coaxially positioned within the filter element which is a cylindrical filter element and the cage is likewise cylindrical and is coaxially positioned about the cylindrical filter element.

22. (currently amended) A filter cartridge comprising:

a filter element having a longitudinal axis, an outer periphery and an inner periphery, and including a pleated microporous membrane filtration media having an upstream and a downstream surface; and a multi-layer downstream pleat support

positioned downstream from the microporous membrane filtration media, the multi-layer downstream support including a first downstream support layer and a second downstream support layer, wherein:

the first downstream support layer is in-contact with the filtration media and is interposed between the filtration media and the second downstream layer, and the first downstream support layer is a non-woven material being fabricated so as to minimize points of surface contact with the filtration media; and

the second downstream support layer is adjacent in contact with the first downstream support layer and is fabricated so as to facilitate lateral fluid flow relative to the multi-layer downstream pleat support, wherein the second downstream support layer comprises an extruded apertured film having ribs formed on at least one side, the primary strand or rib formation running in the machine direction the ribs maintaining a gap when the microporous membrane filtration media is folded onto itself;

a perforated cage surrounding the outer periphery of the filter element;

a perforated core surrounded by the inner periphery of the filter element;
and

end caps enclosing both ends of the perforated cage.